

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: n5off@w5ddl.aara.org
Subject: 390A RF Deck Cover Art
Message-ID: <538640@w5ddl.aara.org>

My Collins, 14214-PH-51 s.n. 7 has artwork on both sides.

Tom

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Larry Godek <AZCOT@gnn.com>
Subject: 73 Mags FS
Message-ID: <199612261553.KAA22057@mail-e2b.gnn.com>

I have a couple of stacks of 73 mags here to dispose of.

Large format: 1977 Jan., May and Dec.
1978 Entire year
1984 June, July and Sept.
1985 March
1980 Jan. thru Sept.

Small format: 1962 Feb.
1963 April
1964 Nov. & Dec.
1966 Sept.
1967 Jan, April & Sept.
1968 Feb., July, Sept & Nov.
1969 March, May & Dec.
1970 Mar., April, May, June, July, Aug., Sept. &
Nov.

How about \$1 each and shipping?

Larry Godek W00GH
AZCOT@gnn.com

Gilbert, AZ. 85233

Ex-W6KQL, W8BPV, DL5LS, K0TAO, KN6TUP

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>
Subject: 75A-4 Technical Problem: Help!
Message-ID: <v03007805aee79fa00c59@[134.53.65.12]>

Hi Gang,

Here's a problem that I bet somebody out there has solved already. Today I installed the K7CMS AGC modification in my recently-acquired 75A-4 (SN 5609), and it seemed to work very well. While I had the receiver on the workbench, I took the opportunity (for the first time) to tweak up the alignment. Everything was pretty close, except one of the 455KHZ transformers had been detuned 10 db or so. When I got everything back together and aligned properly, I noticed that I got some regeneration when I tuned an S9+ carrier onto the steep slope of the mechanical filter. Everything was nice and stable when the signal was either in the mechanical filter passband, or out of the passband. The oscillation only occurred when the signal was on the steep slope. The instability was a motorboating kind of oscillation that sounded rather like a Q-multiplier that was on the edge of regeneration. (Interestingly, I recall having seen the same phenomenon with my 51S1, but don't remember how I fixed it) Unfortunately, I don't know whether the problem was caused by the AGC modification, or whether it existed prior to the modification but was swamped by detuning the IF stage. There is an IF gain adjust in the 75A4, but it doesn't have any effect on the problem. Anybody seen this before and have a cure??

Thanks,

Jim W8ZR

PS - Merry Xmas and happy holidays, everyone. My XYL gave me a beautiful Schurr straight key on a mahogany base for a present. Bless her cute little heart!

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Mark Mandelkern <k5am@lascruces.com>
Subject: Re: 75A-4 Technical Problem: Help!
Message-ID: <199612260531.WAA28279@chile.lascruces.com>

boatanchors@theporch.com 96/12/26

W8ZR wrote:

75A-4 Technical Problem: Help!

>>>> the steep slope of the mechanical filter....
>>>> The oscillation only occurred when
>>>> the signal was on the steep slope.

I have seen the same problem in most radios I've used. I'd call it AGC oscillations. I've reduced it greatly in some radios by adding more bypassing at certain (empirically determined) points of the AGC line. But I don't think it's worth bothering about.

I assume you heard the oscillations on the bench with the sig gen. I once spent a week (20 yrs ago) on a radio trying to cure the "problem" in that situation. I gave up. Then, with the antenna, the problem was not heard!

The oscillations do not occur in my radio:

A High-Performance AGC System for Home-Brew Transceivers, QEX, October, 1995, 12-22.

It would be impractical to put the new AGC in the 75A-4, but the article covers AGC problems in general, and may give some ideas for things to try for modifications that might eliminate the oscillations.

73,

Mark, K5AM, DM62ni, k5am@lascruces.com

Mark Mandelkern
Las Cruces, New Mexico, USA

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>
Subject: Re: 75A-4 Technical Problem: Help!
Message-ID: <v03007807aee831e86cc9@[134.53.65.12]>

>>
>I have seen the same problem in most radios I've
>used. I'd call it AGC oscillations. I've reduced it
>greatly in some radios by adding more bypassing at
>certain (empirically determined) points of the AGC
>line. But I don't think it's worth bothering about.
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>I assume you heard the oscillations on the bench
>with the sig gen. I once spent a week (20 yrs ago) on a
>radio trying to cure the "problem" in that situation.
>I gave up. Then, with the antenna, the problem was
>not heard!
>>
>Mark, K5AM, DM62ni, k5am@lascruces.com

Hi Mark,

Yes, I noticed the instability only on the bench with a signal generator, and not on an antenna in normal usage. I agree that the oscillation seems to be associated with the AVC, though its odd that it only happens on the slope of the filter passband. The only explanation I can think of would be a slight pulling of the PTO frequency (or--less likely -- the HF crystal oscillator) with changing AVC voltage. In normal use the pulling wouldn't be noticeable, but with a strong signal on the steep slope of the passband it could lead to a situation where the AVC couldn't stabilize the signal, since it would in effect be modulating the signal strength through the pulling of the PTO. Since I've also encountered this problem on my 51S-1, I'm gessing the problem is generic and not associated with a defective component. I think I'll forget about it and button the radio back up. Thanks for your comments.

73,

Jim W8ZR

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: BEN NOCK <106312.1035@compuserve.com>
Subject: ARC-109 info wanted
Message-ID: <199612261304_MC1-DE6-134F@compuserve.com>

I'm looking for info, circuit etc, and circuit
of controller, psu etc, for the ARC-109.

Any help greatly appriciated.

Ben G4BXD.

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: merrigan@ee.ualberta.ca
Subject: BA Audio: The Final Word (Ha!)
Message-ID: <199612262029.0AA08850@uro.theporch.com>

WHICH: <539032@w5ddl.aara.org>
WHEN: 12/26/96 at 12:23 PM (SystemDate:mst)
WHO: n5off@w5ddl.aara.org
WHAT: Keronomos vs. SP-600???.

I say:

>How does the R-390A w/K deck compare with a stock SP-600 audio?

The SP-600 is OK with a decent speaker, or amp/speaker combination, but the BEST BA audio I have ever heard is the from the CR-88/CR-91A. It is better than the SP-600, better than the HQ-180A, and better than any other BA (or non BA: Kenwood R2000, NRD-525) I have ever owned. The CR-88 is not the "world's hottest DX machine", but it can hold its own. But the audio quality, oh the audio quality! Program listening is a joy, given a reasonably clear channel.

Happy New Year to All!!

Shaun

--

merrigan@nyquist.ee.ualberta.ca
Electrical Engineering Student
University of Alberta
Edmonton, Alberta, Canada

"Do you guys know what a switch is ?"

-EE professor (Introductory Microprocessors) after
observing dumbfounded looks

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Tom Norris <badger@telalink.net>
Subject: BA Sighting "20 Million Miles To Earth"
Message-ID: <2.2.32.19961226040908.006d310c@telalink.net>

The SciFi channel ran the really awful 20 million miles to earth this

afternoon. Bad movie. Had at least one BC-611 shown, though.
Guy actually pushed the PTT when using it, too. the other party
he was in communications with was in a car on the other side of
whatever city -- the car seemed to have no antenna of any sort, but
the driver was speaking into a mic to the guy with the 611....

Been a long day. Hope everyone had a nice or at least tolerable
Christmas.

Tom Norris KA4RKT
badger@telalink.net Nashville, Tennessee, USA

Eagles may soar, free and proud, but weasels never get sucked into jet engines.

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: wallace@world.std.com (Andy Wallace)
Subject: BA sighting, TORN CURTAIN
Message-ID: <32c3eee2.14989197@world.std.com>

Look at the ship's radio room in the beginning of this Hitchcock
film... You get an obstructed view of what is either a Collins 75A-4
or KWS-1. Definitely a piece of St. James Grey with a meter on the
left!

--Andy
wallace@world.std.com

Curly: Oh....short wave?
Moe: No! Poimanent.
<BONK!>

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: BEN NOCK <106312.1035@compuserve.com>
Subject: Collins 618-T2 info wanted
Message-ID: <199612261304_MC1-DE6-134E@compuserve.com>

Hi, I am looking for info, circuit of set, control box etc
for the Collins 618-T2 hf tx.

Any help greatly appreciated.

Ben G4BXD.

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: Ronnie Hull <larebel@ms1.nwla.com>
Subject: Drake 2AC
Message-ID: <1.5.4.16.19961226172722.08af10f6@ms1.nwla.com>

Howdy fellows

Santa brought me a 2-B, isn't she nice? (Mrs. Claus that is) anyway, it has a homebrew crystal calibrator in it, and I sure would like to have an original. Can anyone help me with this? Do you have one to spare? I know, Im crazy to think so but one can always hope right? LOL

Ronnie - W5SUM

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: John Wieder <jwieder@gunnison.com>
Subject: EFJ paper
Message-ID: <199612261805.LAA07732@gunnison.com>

To the list:

Before I throw this would anyone want the original or a copy? It is a one sheet (front and back) "Operating Instruction" for the Johnson SWR bridge. I'll send the original to the first reply and if you don't mind a copy please advise.

Happy New Year. 73
John K0JY
jwieder@gunnison.com

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: William Donzelli <william@ans.net>
Subject: ET-3627 = T-4C?
Message-ID: <199612261747.AA22665@interlock.ans.net>

One of the things about packing up ones belongings is finding things that you forgot you had. It happened to me, as I dug up *Radio Telegraphy and Telephony* by Duncan and Drew - a wonderful old book (on decent paper!)

from 1929, showing quite a few vintage shipboard and broadcast transmitters with schematics and details. One of the sets shown is the RCA ET-3627-A low frequency transmitter - a 200 Watt medium sized monster with three type 211 tubes.

This thing looks VERY similar to a Coast Guard set I obtained a couple of years back. The ca. 1935 government set is labelled T-4C, and looks to be an upgraded ET-3627-A. Perhaps the T-4C is equivalent to a later revision of the ET-3627 (a -B version?)? I do not know, as I do not have a manual (or any data) about the T-4C - but I have my suspicions.

Do any of you have any data for the T-4C or ET-3627s (longshot request)? I am missing a few parts (meters), and would really like to put them back.

William Donzelli
william@ans.net

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Tom.Daley@530.gigo.com (Tom Daley)
Subject: fs: drake L-4
Message-ID: <afa_9612251925@gigo.com>

hello ba people the following is for sale

drake L-4 linear amplifier 80-10 meters in very good condition. chassis under dust is very nice & underside looks virgin ! powered by 2 3-400z eimac with chimneys. front panel is in very good shape and complete with all meters, knobs and switches in great condx. one chimney is cracked ! with original manual ! amp case is in good shape except dent in front left corner. caps, tr relay and bandswitch have no pits or burns ! power supply in good condx and wired for 220 volt ac. tubes dated 1967 with all cables. can use 3-500z also ! untested ! \$350

plus shipping in 3 boxes (amp, supply and glass !!)

please send along your zip with reply - located in sacramento 95811 tom

--

: Fidonet: Tom Daley 1:203/530 .. speaking for only myself.
: Internet: Tom.Daley@530.gigo.com

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: "Chuck (Jack) Hawley" <c-hawley@uiuc.edu>
Subject: FT243 xtals

Message-ID: <32C2F1C0.67A2@uiuc.edu>

Hi,

Does anyone know where to obtain FT243 xtals? The desired frequencies are 3880 KHz, 3885 KHz, and 7290 KHz, 7295 KHz in case anyone has these.

Thanks,

Chuck, KE9UW

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: marty@aa4rm.radio.org (locale for Marty Reynolds)
Subject: RE: HOHOHO... / 'V3
Message-ID: <199612261126.GAA22525@aa4rm>

Joe, the only caveat on those rigs was an overstressed LV transformer

A good fix is silicon rectifiers (with seriesed surge / dropping resistors) as substitutes for the 2 5R4GYs & the 5Z4 tube rectifiers. This drops the xfrm'r.s load 30W & brings it back into the 'comfortable range.'

\$200 I cheap for a complete (all perf. shields intact) & moderately clean one.

Best & Merry right back!

Marty

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: standard@pcs.mb.ca (Gary Smith)
Subject: How to cure a drifty SWAN 350
Message-ID: <199612261814.MAA14952@pcs.mb.ca>

Karl, W5QJ wrote.....

>Last October, I picked up an average looking Swan 350 and after a bit of
>tinkering and replacing a component or two, got the thing working again.
>
>All is well except it seems to have an inordinate amount of drift. Even
>after an hours warmup, it never really settles down.

>

>I've been told that this particular radio is infamous for this. Surely,
>someone has come up with and improvement?

An article on this problem was written by Harold Klimpel WA6IPH, and appeared in the August 1979 issue of Ham Radio. It goes on to say:

"Most drift occurs in the VFO coil, caused by changes in coil dimensions with temperature. Drift in the Swan 350 is likely aggravated by the seven tubes clustered around the VFO box. Lack of ventilation traps the heat inside, thus extending the time before drift levels off. On-off cycling over the years will gradually stretch the wire to a point where it will not return to normal."

I won't re-type the article, but he goes on to change C1709 cap, and by plotting the drift on paper, comes up with the proper (12-pF/N220 and a 10-pF/NP0 resulting in N120) capacitor on his third try.

His results were good, and with a 1200 hz drift at start, ended up with about 100hz drift.

Keep those SWANS alive!

73

Gary VE4YH

PS Check out the Swan net Sunday afternoons 14.251 (plus or minus drift HI HI) at 3:30-4:30 central NA time.

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: "Deane D McIntyre" <dmcintyr@acs.ucalgary.ca>
Subject: HP 400D VTVM
Message-ID: <9612262148.ZZ248252@ds1.acs.ucalgary.ca>

Gang:

I recently acquired one of these beasts sans documentation. Appears to sort of work and is nice and clean. When off the meter needle sits where it should, with power applied the needle sits above zero, and I cannot find a control inside to zero it as with most AC VTVMs, only a amplifier bias control and various caps and pots to

set the high and low frequency response and heater voltage.

Am I missing something obvious here? Any things to look out for in this beast? I am hoping that none of the caps are paper....

73, Deane D McIntyre VE6BP0
Deane@deane.bio.ucalgary.ca
dmcintyr@acs.ucalgary.ca

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: John Kolb <jlkolb@cts.com>
Subject: Re: HP 400D VTVM
Message-ID: <Pine.SCO.3.91.961226142258.43A-1000000@sd.cts.com>

On Thu, 26 Dec 1996, Deane D McIntyre wrote:

> I recently acquired one of these beasts sans documentation. Appears
> to sort of work and is nice and clean. When off the meter
> needle sits where it should, with power applied the needle sits above
> zero, and I cannot find a control inside to zero it as with most AC

I remember a HP 410B long ago and far away that still had an offset after checking all the normal things - turned out that the wire to the grid of the input amp had become slightly conductive with age - replacing with teflon wire, and not lacing it back into the harness cured it. Not likely to be anything this strange, but remember leakages in the hundreds of megohms can be enough to upset high impedance amplifiers.

John

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: "Lon W. Cottingham" <k5jv@swweb.net>
Subject: Increased Audio Without Splatter
Message-ID: <199612261601.KAA03505@uro.theporch.com>

Greetings All,

Is there any interest in a paper written by John L. Reinartz, K6JB, of EITEL -- McCullough, Inc., called "INCREASED AUDIO WITHOUT SPLATTER". This paper deals with negative loading (not negative clipping). It is technical, but not above the average Ham. It answers the often asked question of why one tube in a push pull modulator fails before the other. We are not talking about filament burnout or component short problems here -- one tube dies before the other from normal

use.

In 1958, I built a Heath Kit Apache transmitter that has been running ever sense. In fact, it is still setting in the same location. Through the years one of the EL-34 modulator tubes has been replaced three times. The other is original. I have also noticed this phenonimom on several other tube-type modulators. My curiosity got the best of me. I asked Richard Measures, who is the most knowledgeable man I know on the subject, what caused this condition. Richard put me on to Reinartz's paper. It was written in the 1950's aroud the "end of the AM era" and, apparently forgotten.

I also have a paper by Reinartz dealing with harmonic suppression in push pull amplifiers. I mention this because of a recent discussion I had with a fellow AM'er who was building a new rig. His idea was to use push pull output instead of Pi or Pi-L because, in his mind, push pull gives greater harmonic suppression. This really set me back and sent me to the bookshelf to refresh my memory. There sure is a lot of mis-conceptions about AM floating around out there.

If this has aroused some interest, let me know and I will post the original papers or send them by individual e-mail.

P.S. This discussion has nothing to do with R-390A audio -- were talking transmit audio now. I know this last statement is tacky, but you would not believe some of the responses I have received from the R-390A audio posting. Several did not even come close to relating to the subject. However, they were all fun and I do appreciate all of the responses.

73 de Lon, K5JV

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: Ronnie Hull <larebel@ms1.nwla.com>
Subject: Johnson Manual
Message-ID: <1.5.4.16.19961226172523.1c0fe0e8@ms1.nwla.com>

Howdy Ya'll

I am not the proud father of a very very nice Johnson 275W matchbox with swr coupler and meter. I need a manual for this beast. Does anyone have one for sale or could I get a copy?

Ronnie - W5SUM

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: n5off@w5ddl.aara.org
Subject: Keronomos vs. SP-600???
Message-ID: <539032@w5ddl.aara.org>

How does the R-390A w/K deck compare with a stock SP-600 audio?

Thanks,
Tom'

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: "William B. Ross" <billross@txdirect.net>
Subject: Re: More R-390A Audio
Message-ID: <32C1F591.4709@txdirect.net>

Benjamin D. Hall wrote:

> Just a question to the group here, this seems to indicate that R-390
> audio is nicer than R-390A audio? I don't have my R-390 going yet so I
> don't know first hand... Could someone please educate me?
>
> Thanks and 73,
> Ben

I've always considered the R390 a better receiver in most ways.
Without a doubt though the audio is smoother and more robust from the
R390.

Bill Ross K5LLK

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: bdhall@ghg.net (Benjamin D. Hall)
Subject: Re: More R-390A Audio
Message-ID: <32C287C3.509C@ghg.net>

William B. Ross wrote:

> I've always considered the R390 a better receiver in most ways.
> Without a doubt though the audio is smoother and more robust from the
> R390.

Hi Bill and list... This makes a lot of sense considering that the A is
a cost reduced 390 non-A. I'll let y'all know what I find out when I
get mine working! One of my New Year's resolutions is to get the R-390
going by figuring what is going on with it myself, or saving up the

money to send it to Rick Mish for the Royale treatment...

Thanks and 73,

Ben

--

>From the computer of Benjamin D. Hall, junque collector extraordinaire.
Home for the holidays in Huntsville Alabama, deep in the Heart of Dixie.
e-mail: BDHall@GHG.net

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996

From: n5off@w5ddl.aara.org

Subject: Need TM Manual ID Help

Message-ID: <538578@w5ddl.aara.org>

I'm trying to help someone hunt down an original manual for the R-725.

I have a reference to a Navy manual entitled:

"U.S. Navy NSN 5820-00-926-0180: Operation, Maintenance and Installation Manual, Radio Receiver R-725/URR".

This sure sounds like the right thing, but my last tip led to a TRD-15 manual and not a 725 manual.

Can anyone confirm the existence of this book?

Q2: Anyone got a source for new Navy manuals?

73 and thanks,

Tom

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996

From: "Lon W. Cottingham" <k5jv@swweb.net>

Subject: Old friends from South East Asia

Message-ID: <199612260313.VAA23685@uro.theporch.com>

Greetings to all,

This posting may not meet the exact standards of The Boat Anchors -- But, then it may. I am going to risk it.

I would like very much to re-new some old, or make some new, acquaintances from the 1960's in South East Asia. The people I am talking about were Hams. I know because I gave them tests for their Conditional Class Ham

License. Between the January, 1966 and March, 1968, I gave Conditional Class tests to approximately twenty-five people. These people were all employees of Continental Air Services, Air America, or RMKBRJ. The tests were given in Vientiane, Laos and Saigon, SVN. There may have been one or two given in Udorn, Thailand. I am not sure about this.

Through the years I have lost contact with these people. I still work Ben Stewart ever now and then. Ben was XW8BS at the same time I was XW8BT. That license is hanging on my wall next to K5JV. It would thrill me immensely to find that one, or more of these old friends are regulars on The Boat Anchors. (Actually, it would thrill me to find any of them alive.) If any of you have information about Hams from this location in that era, I would appreciate it if you would put them in touch with me.

One thing that will be of interest to most of you was the use of Collins and Drake Ham equipment in SEA. Our largest Customers, RMKBRJ, used Drake transceivers throughout their system. They had full time Philippine operators. Both SSB and CW were used. My company, Continental Air Services, used KWM II's. Once in Saigon, some parts for a 516F2 power supply were needed. After a few inquiries, I was given a location, in an out of the way place of a storage area used by Alaska Tug and Barge, another of our Customers. This barn was full, literally stacked from floor to ceiling with Collins S-lines, KWM II's, 30L1's, and 30S1's. I only took two power supplies, as that was more than I really needed at the time. I have had second thoughts lately about that decision.

Ham Radio came to the rescue many times during my thirty odd years of flying throughout the Pacific. Once, after a terrific typhoon in the Guam / Saipan area (as I recall, it was Pamela), with all regular communications out for several weeks, all of our Air Micronesia operations and dispatch was handled via Ham Radio. The onboard Collins 618T transceivers worked direct to two Ham stations in Honolulu where phone patches were made to Fleet Weather Central and the FAA Center for weather and flight clearances. Let me say that this was done with the blessing of both FCC and FAA because this operation was considered an emergency.

Please E-mail me if you have information on the subject. By the way, RMKBRJ stands for Raymond International, Morrison Knudson, Brown and Root, and Jones International.

73 de Lon W. Cottingham, K5JV

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: MODSTEPH@ACS.EKU.EDU

Subject: Re: Old friends from South East Asia
Message-ID: <01IDG1SUI76A000IOS@ACS.EKU.EDU>

I am not one of those who got the Conditional license in SEA, but I was there in 1969. During that year I was, among other things, Base MARS Director at Nakhon Phanom Royal Thai AFB and later at Udorn RTAFB. In that capacity we handled a whole bunch of morale traffic, phone patches particularly. Interesting to note that when we worked into Barry Goldwater's amazing MARS operation, he picked up the tab for the land line calls passed along from there.

At Udorn I was fortunate to have a MARS NCO who was also a ham. Between the two of us we designed and built a four-element full size cubical quad cut for a single frequency (just above 20 meters). The chopper folks helped him mount it atop a 90 foot pole we had right outside the MARS station - and once that was installed we were passing phone patch traffic when other SEA stations could not hear the stateside ones. Rig: KWM-2 and 30L-1 -- and that wonderful antenna!

The station at Nakhon Phanom had a log periodic and no hams among the operators, so they lacked the interest in building a better antenna. I did not order it since they were very busy just running the station.

The best time for phone patch traffic was early morning local time, and when we had no one waiting in the station but had an open circuit, I had the operators call around where folks were working 24 hours. We made a lot of friends that way: an airman working in the rain on the flight line at 2 AM and gets a call to talk to home...

Air America was at Udorn - but would rather not discuss our dealings with them!!

73, Al N5AIT
modsteph@acs.eku.edu
Allan Stephens
Richmond, Kentucky

LOOKING FOR (WTB): Multi-Elmac M-1070 ps
Harvey-Wells APS-50 ps

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: marty@aa4rm.radio.org (locale for Marty Reynolds)
Subject: QST, CQ, HR fm '69
Message-ID: <199612261428.JAA22881@aa4rm>

At \$4 per year, that's:

QST 1969-1995	\$108
CQ 1969-1995	\$108
Ham Radio 1969-1987	\$76

\$250 the works, no handling! IE, will crate free.

Cheaper if Atlanta, GA p/u.

Will wait 2 weeks before I post this next offer:

\$6 per year FOB Atlanta Ga., \$3 handling ea., 3rd class avg. postage
\$4.50/yr.

Marty AA4RM

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Bill Sorsby <bill.sorsby@dlep1.itg.ti.com>
Subject: Re: R-390A audio
Message-ID: <199612260445.WAA21431@lesol1.dseg.ti.com>

At 02:45 PM 12/25/96 -0600, Mike Maloney wrote:

>>Honestly, the country music on this AM radio with a steel shelf unit as
>>an antenna sounded like top-notch FM. It is that good. Plus, you could
>>turn it up enough that you could hear it at very little distortion
>>across the room.
>>
>Come on now Ben, what AM stations have the audio fidelity/quality of
>"top-notch" FM? I have not found any, even the local or semi-local BCB
>stations that have lots of signal pale in comparison to FM. My BC348Q was
>weak in the audio until I got a decent universal line to vc transformer and
>conected it to a very efficient corner reflector speaker.

FWIW, fidelity from AM broadcasting is not unheard of and, although it may be rare, it is quite feasible and a number of hi-fi AM broadcast transmitters exist. (I used to work for a station that had one.) Unfortunately, like TV audio, nobody expects much fidelity from AM so most broadcasters simply aren't concerned with it. Even worse, is the fact that the AM receiver sections in most "hi-fi" stereo systems aren't hi-fi either, very few possess either the necessary bandwidth or a low-distortion demodulator.

With regard to fidelity, a properly operating R-390 or R-390A will outperform the vast majority of "hi-fi" stereo systems. IF filtering in an

R-390/A can provide essentially flat frequency response to nearly 16 kHz when tuned to one sideband of an AM signal. Coupling that with a good demodulator and audio amplifier should provide very nice audio. I've not heard the Kleronomos mod but can easily believe the claims being made for it.

Regards,
Bill Sorsby, N5BU bill.sorsby@dlep1.itg.ti.com
Grapevine, TX 76051

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: Re: R-390A audio
Message-ID: <Pine.SUN.3.91.961226092307.5630C-100000@indy2>

On Wed, 25 Dec 1996, Mike Maloney wrote:

> >> Come on now Ben, what AM stations have the audio fidelity/quality of
> "top-notch" FM? I have not found any, even the local or semi-local BCB
> stations that have lots of signal pale in comparison to FM.

Nope, honest; AM radio *can* sound good--the problems are (largely) in the receivers, which must deal with very close-spaced stations and a high noise level.

In the 70s-80s, we routinely measured frequency response of AM transmitting systems substantially flat to 12kc/s or higher; distortion well below 0.1%. Nowadays, there's been some rule changes but decent response is still possible (and they're having to limit audio response to meet the spec!).

...But AF response vs channel spacing is part of the problem. If an AM station takes up 20kc/s with its signal, and skywave drags in another station on an adjacent channel, a really flat radio will whistle the 10 kc/s beat note at you. Folks didn't like that; result, most AM radios have narrow filters (with crummy shape factors) in the IF.

As for the noise, you won't get superquiet AM radio on a distant station; but the locals are pretty good. No mystery here--you want good S/N ratio, you need lots more "signal" than "noise!"

So, assuming the RF/IF sections of the R-390 et al are as good as claimed (and they'd better be!), a well-designed AF amp darned well *ought* to provide crystal-clear, sparkling audio. Kleronomos is a BC engineer, and he darned well knows what he's putting in at the transmitting end--doesn't surprise me his expectations and results are high for the receiving end! Nor would I be amazed if, with wide IF BW and

the skywave rolling in, the radio would produce some nasty 10kc beats. (The way to fix this, BTW, is with an AF notch filter--simple, fast and effective).

In the bright, deluded days when AM Stereo was gonna save the band, the AM/FM combo I worked for sounded very nearly the same on a good receiver (Sony made a few for AM Stereo that had good bandwidth). As one ran AOR and the other Classic Rock, there were occasions when the same selection could be A-B'd and it took serious analysis to tell 'em apart.

But old myths die hard--noted one of my least favorite canards ("AM BC can't possibly transmit audio freqs above 5kc/s," hmpf!) showed up in ER recently. Years and years of crummy AM BC *receivers* have convinced people it can't ever sound good. :((Nor do comms receiver do much generally to correct this impression--we usually don't want wide response!)

...To tie all this back into boatanchors, those converted AM BC transmitters some BAers use are probably cooking a few extra Watts of transient energy that never show up at the receiving end. In ham applications, where all we're transmitting is voice, rolling off the response above 7500 cps won't hurt the fidelity much (if at all) and will make the thing a bit of a "better neighbor." Even 5 kc/s won't do a lot, though things will start sounding a bit muddy if LF response isn't limited a bit as well.

73,
--Bobbi

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: bill@skeeter.frco.com (William Hawkins)
Subject: Re: R-390A audio
Message-ID: <9612261730.AA10237@skeeter.frco.com>

Thanks, Bobbi. I was afraid that high-end audio had come to BA, and was about to make some smart remark, like "The very best AM audio comes from two speakers, using two Collins R-389's (with consecutive serial numbers) and diverse antennas. Country music is best when using steel guitar strings for antennas." But I won't say that, because your clear explanation has put an end to it.

Communication receivers were designed for a non-negligible signal to noise environment. High fidelity requires inaudible noise. You can't have both. I think I'd hang an amp flat from 10 Hz to 50 KHz on the diode load for those occasions when there was something worth listening to on AM with high fidelity. Of course, if you've got a lo-Z speaker connected to the 600 ohm output, you need to do *something*.

Regards,
Bill Hawkins

For every thing, there is a season,
and for every group of prey, predators.

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: "Edward J. Zeranski" <ejz@nosc.mil>
Subject: Re: R-390A audio
Message-ID: <2.2.32.19961226214832.00c2821c@marlin.nosc.mil>

At 19:58 12/24/96 -0600, you wrote:

>At 06:23 PM 12/24/96 -0600, Tom Norris wrote:

>>Not sure what the big flap is about the R-390A not having decent
>>audio.

>No Tom, you are probably just using the receiver the way it was intended to
>be used. I use a 500 ohm mil speaker (LS-166 if I remember
>correctly) or a hi-impedance telex headset with mine and have plenty of
>audio to blow me out of the room.

>

> I have several LS-474 speakers that I use with my R390As. Ain't
HI-FI but good enough for a receiver that was set up to copy fleet broadcast
and ratt. Am looking for rebuildable audio chassis to try the 6360 audio mod
by Bill Kleronomos from ER. Got the tubes , Mullard, hidden away just in case.

Ed Zeranski ejz@marlin.nosc.mil, work
ezeran@cris.com home

Wooden Boats, Tube Receivers, Rusty Old Trucks, The Good Stuff!

This is a private opinion or statement and is nobody's fault but mine. No
person, employer, or govt. should try to take credit for it!

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: "John H. Dilks III" <oldradio@worldnet.att.net>
Subject: Radio Swap Meet - Feb. 15th. Near Philadelphia
Message-ID: <19961226203021.AAA25631@LOCALNAME>

to all,

Radio Swap Meet - Feb. 15th. Near Philadelphia

The Delaware Valley Historic Radio Club will have an indoor swap meet and

A-u-c-t-i-o-n

of vintage and Boatanchor radios, accessories, books, magazines, tubes, etc.
There will be items from several estates as well as bring-ins.

For more information there is a map and information on the NJARC Web Page:

<http://www.globalent.net/oldradio>

-also-

Check out the great new book: TUBE: The Invention of Television. This is a major new work on the history of Television, who made it and how they did it.

Check out the monthly column on Telegraph.

There's always something new about Old radio on our page;
we update it every week! Check us out.

73' John Dilks, K2TQN

```
.=====
| 73's from John H. Dilks, K2TQN, oldradio@worldnet.att.net |
| There's always something new about old radio on our Web Page. |
| We update it every week! |
|-----|
| NJARC is on the WEB - http://www.globalent.net/oldradio |
| Bringing Radio History to Everyone. - Check us out! |
'|-----'
```

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: Re: RCA Cunningham tube query
Message-ID: <Pine.SUN.3.91.961226085343.5630B-100000@indy2>

Hi!

Ahhh, yes, good old E. T. Cunningham! The outfit started out as a sort of "pirate," with pseudo-agreements with de Forest and (per Tyne but he later appears to contradict it) Marconi.

Originally they made an Audion clone (ca. Nov. '15) under the name "Audio-Tron." It was pretty popular--per Tyne's "Sage Of The Vacuum Tube," the most widely sold and used of the independant tubes.

De Forest sued them. (Students of tube history will note that "sued" and "de Forest" usually appear in the same sentence). They settled in '16. After WW I, Audio-Tron ads noted the tube was licensed under the de

Forest patents for use as an RF amp. (Competing ads noted it was *not* licensed under the Fleming patents!)

In Oct '19, the Radio Corporation of America was formed, and promptly sued Cunningham. (See statement in re de Forest above; RCA is the second most likely name to appear in a sentence containing the word "sued.")

But Cunninham was in a pretty good position, and they settled out of court in June, '20, with Cunningham allowed to make and sell tubes for 90 days; after the 90 days were up, Cunninham was to stop *making* tubes but RCA would let them sell tubes supplied by RCA 'til Feb, '25, when the de Forest patent (879,532) expired.

It would appear that Cunningham and RCA renegotiated this agreement--in March '27, sales managers from both RCA and Cunningham were interviewed about the furor over the new AC-heater triode (UY227) shortly to be introduced.

In '31, Cunningham became a subsidiary of RCA, probably another casualty of the Depression. The brand-name continued for some time (mid-late '30s?), and then faded into obscurity.

The *original* agreement between RCA and Cunnningham was that the tubes supplied by were *not* to be marked indicating that RCA made them. I strongly suspect that the "RCA Cunningham" tubes we've encountered were made *after* the takeover in '31. RCA tended to do things like that; Sarnoff was always well aware the the original intent was for RCA to be a patent pool of *all* radio patents in the US and all the manufacturing as well. Never happened but he was ever seeing how close he could approach that goal, and not above a bit of gloating.... :)

73,

--Bobbi

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996

From: "Lon W. Cottingham" <k5jv@swweb.net>

Subject: Reinartz' papers

Message-ID: <199612262149.PAA10025@uro.theporch.com>

To all who have asked,

Thank you very much for the incredible response to the my posting. I have attempted to reply individually. There have been so many inquiries that I can no longer do this. Thus, this posting.

I am attempting to scan the 16 page document into an E-mailable document. I am new at this sort of thing. Please bear with me. As soon as I get it done, I will E-mail individually because I thing a 16 page document is a little much for the BA list. The paper is great. You had better start brushing up on your math.

73 de Lon, K5JV

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: John Poulton <jp@cs.unc.edu>
Subject: RG-Trivia Question
Message-ID: <199612261916.0AA15459@mira.cs.unc.edu>

I'm involved in writing an engineering textbook and have been working on a chapter devoted to packaging, cabling and such. Got to wondering:

Does anyone on the list know the origin of the "RG" in coax cable designations? Whether there's a rhyme or reason to the numbering system? How a cable mutates from "RG-xx" to "RG-xx/U" or "RG-xxA/U"?

I'd like to know for my own curiosity, but also because I think it's our duty as textbook writers to make this kind of lore more generally accessible to students. In fact, if anyone has any pet peeves about the content of modern engineering texts (I sure do!), here's your big chance to influence an author!!

Thanks much!
John Poulton
jp@cs.unc.edu

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: Sandy W5TVW <ebjr@worldnet.att.net>
Subject: Re: RG-Trivia Question
Message-ID: <19961226210315.AAA1010@LOCALNAME>

At 07:19 PM 12/26/96 +0000, you wrote:

>

>I'm involved in writing an engineering textbook and have
>been working on a chapter devoted to packaging, cabling
>and such. Got to wondering:

>

>Does anyone on the list know the origin of the "RG" in
>coax cable designations? Whether there's a rhyme or reason

>to the numbering system? How a cable mutates from
>"RG-xx" to "RG-xx/U" or "RG-xxA/U"?
>
>

John,

The "RG" designation does not only cover coaxial cable, it applies to waveguides as well! I can't tell you if there was ever any "official" designation for open wire line, another 'transmission line'. The "RG" designation is a Joint Army-Navy (JAN) designation. Waveguides have a "WR" nomenclature too which is RETMA standard. Same thing applies to connectors. They have a "UG-XX/U, UG-XX-A/U..etc" designation. The one exception that we are all familiar with is the "PL-259" for the commercial "UHF" series. The others such as "BNC", "TNC", "N" etc. are all commercial families of connector types. I could find no reference to the "why" for RG numbers in "Antenna Engineering Handbook" by Jasik, which is pretty inclusive. I believe it was a purely arbitrary designation that was picked in the "JAN" nomenclature system.

73,

E. V. Sandy Blaize, W5TVW

"Boat Anchors collected, restored, repaired, traded and used!"

417 Ridgewood Drive,

Metairie, LA., 70001

ebjr@worldnet.att.net

Looking for: ELMAC PMR-7/PMR-12, Hallicrafters SR-75, 860 tubes

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996

From: "Roberta J. Barmore" <rbarmore@indy.net>

Subject: Re: RG-Trivia Question

Message-ID: <Pine.SUN.3.91.961226163104.29888B-1000000@indy1>

Hi, John et al!

On Thu, 26 Dec 1996, John Poulton wrote:

> Does anyone on the list know the origin of the "RG" in
> coax cable designations?

It may well be apochryphal, but I've seen WW II-era reference to the "Radio Guide" series of concentric cables (coax) and that made pretty good sense to me as the source of "RG."

> Whether there's a rhyme or reason to the numbering system? How a
> cable mutates from "RG-xx" to "RG-xx/U" or "RG-xxA/U"?

It starts out with one formulation of plastic for the jacket, and in practice that stuff is found to get sticky and migrate into the braid and the inner insulator; then some bright chemical engineer reformulates it so the jacket plastic is "Uncontaminating," and you get a "U" tacked on so folks will know it is The Good Stuff.

The "A," so far as I know, works like tacking an "A" onto a tube number: it implies an improved and downwards-compatible version. Changing the center conductor so it won't break as easily, etc. etc.

Now the *numbers* themselves don't seem to have a lot of rhyme or reason. RG-58 is about half the size of RG-8 and about the same Zo, while RG-59 is about the same size as -58 but higher Zo...but that's (probably) happenstance. I strongly 'spect Uncle Sam, the first big user and namer of flexible coax, just numbered 'em as they were developed. But I can't back that up. (Paging Historian van Cleef!)

73,
--Bobbi

(Don't even get me started about Counselman & Neil--they were doing okay 'til they teamed up and made the Bayonet Neil-Counselman connector, without which television would not be nearly as much fun... :) Hey, can anyone verify the correct spelling of their names? I like to annoy the other techs by properly labelling the connector stock!)

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: William Donzelli <william@ans.net>
Subject: Re: RG-Trivia Question
Message-ID: <199612262240.AA29883@interlock.ans.net>

John Poulton asks:

> Does anyone on the list know the origin of the "RG" in
> coax cable designations?

Originally, RG and UG designations date to World War 2, when the government tried to standardize equipment and parts between the services using the "A/N" system.

I do not know what UG and RG stand for (note: there are many "types" in the A/N system - some actually make sense!), but the "/U" at the end means it is for _U_niversal use. A/N typed parts generally conclude with a slash, then a complex code designating many things, including where the part is to be used. "/U" means it could be used anywhere - aircraft, submarine, tank, grunt's back, etc.. If a cable was meant for ONLY submarines, it would be "/B", if ONLY for fixed shore installations, it would be "/F", and so on.

As far as I know, all coax cables (RGs) and coax connectors (UGs) are "/U"s (other connectors, namely plain U-*/s, do specialize in the telegraph and telephone world).

The "A" simply means the first revision or sub-type of the spec. The numbers are only numbers, starting when the system was initiated during World War 2.

Ray Mote wrote an excellent description of the A/N system for *Electric Radio* some time back. For a much better explanation, I suggest his work.

William Donzelli
william@ans.net

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: marty@aa4rm.radio.org (locale for Marty Reynolds)
Subject: S38 socket riv.s / GT550 ailment too!
Message-ID: <199612261630.LAA23099@aa4rm>

ReRe RIBBETS

Those rusty devils are THE problem in Galaxy GT550s too. RF bypasses all go to riveted Compactron socket retainer rings. Oxide boundary forms & then the thing goes mad.

I bet those rivets are responsible for 98% of all 6HF5 tube purchases by Galaxy hams.

The GT550 is almost unconditionally stable if the RF bypasses go right to gnd. Best fix is solder the base rings to the chassis with a GREAT BIG AHRONN.

MR

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Pete McCollum 26-Dec-1996 0957 -0700 <mccollum@ssdevo.ENET.dec.com>
Subject: Santa brought me...
Message-ID: <9612261659.AA04030@us3rmc.pa.dec.com>

Santa was nice to me. He brought me:
An 'unused' MT-297/GRC mount to hold my RT-68, PP-112, and RT-70;
A pair of PRT-4A's, complete and functional, with *consecutive* serial numbers, both crystaled for 49.6 and 51.0, and they even have the lanyard cord and clip attached to the back.

Pete

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: howellh@winthrop.edu
Subject: SB-101 Low Output
Message-ID: <96122520055054@winthrop.edu>

WINTHROP UNIVERSITY

Electronic Mail Message
Date: 25-Dec-1996 07:57pm EST
From: Haney Howell
HOWELLH
Dept: Mass Communication
Tel No: 323-4534

TO: Remote Addressee (_smtp%"boatanchors@theporch.com")

Subject: SB-101 Low Output

Giving the SB-101 a good run before the trip to the shore and a problem popped up. For whatever reason, I now have low output output at times on LSB, while the USB and CW modes have full output. I'm also noticing that the output power seems to drop off on the LSB as well. Pulled the relays and hit the pins with Dioxit and that settled a problem with intermittant low receive audio. Also notice a difference in output when I switch power supplies (I have a couple).

Very low-tech question. The book calls for 50 mils of bias, but then it tells you the meter is 0-1 ma. Huh? The HW-101 has the triangle which makes life easy.

Hope Santa was good to all!

Haney no2n <howellhh@winthrop.edu>

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: w7ni@teleport.com (Stan Griffiths)
Subject: Re: Scope question - CE 100V
Message-ID: <199612261209.EAA07179@kim.teleport.com>

>The lump of coal my Central Electronics 100V brought me was a scope display
>with a non-working intensity control.

>

>After careful checking all components on the scope socket area, I tried
>another 2AP1, and that makes it work perfectly.

>

>2AP1's being kinda scarce, I was wondering if there's a way to get around

>this problem, since the original tube works ok, the display is just a
>little too dim for comfort.
>
>The circuit is pretty much standard - B+ at 600V is run thru a resistor to
>the focus pot (which does adjust focus in the defective tube) and then thru
>another resistor to the intensity pot, the other side of which is grounded.
>The focus pot's wiper goes to grid #3, the intensity pot wiper to the
>cathode. The cathode does have the correct voltage swing (nominal 30 volts)
>even with the defective tube.
>
>So what's the failure mode here? I was thining if the cathode was shorted
>to anything I could isolate it, but inasmuch as the volatages are correct I
>tend to doubt it.

I would suspect a grid to cathode short inside the 2AP1. If it is a hard short, you should be able to detect it with an ohmmeter connected between the appropriate CRT pins. Usually, this would cause the CRT to turn on to maximum intensity and you would have no control over it with the intensity pot. You say the intensity is actually too low, so I suspect it has been the in "maximum intensity mode" for a long time and now the cathode emission is down, hence the intensity is low. If this is the problem, I don't know of a cure . . . sorry.

Stan w7ni@teleport.com

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: vancleef@netcom.com (Henry van Cleef)
Subject: Re: Scope question - CE 100V
Message-ID: <199612261813.LAA03118@netcom9.netcom.com>

As Peter Ferrand discourses

>
>
>
> Well Merry Christmas, all.
>
> The lump of coal my Central Electronics 100V brought me was a scope display
> with a non-working intensity control.
>
> 2AP1's being kinda scarce, I was wondering if there's a way to get around
> this problem, since the original tube works ok, the display is just a
> little too dim for comfort.
>
> The circuit is pretty much standard - B+ at 600V is run thru a resistor to
> the focus pot (which does adjust focus in the defective tube) and then thru
> another resistor to the intensity pot, the other side of which is grounded.

> The focus pot's wiper goes to grid #3, the intensity pot wiper to the
> cathode. The cathode does have the correct voltage swing (nominal 30 volts)
> even with the defective tube.

I'm a bit puzzled here, because what you've described sounds like a grid-cathode short (intensity control has no effect). Have you measured the differential voltage between the grid and the cathode to see that the grid is not swinging with the cathode. How is the grid circuit wired? If it has a grid leak and a cap to unblank it, similar to a conventional audio amplifier circuit, the grid could very well be walking with the cathode.

If the tube is dim with zero grid-cathode bias, it has probably been run that way for some time, and sucked all the emission out of the cathode, and the tube's goose has been cooked. Remember that a CRT cathode-grid structure are very different from those in a conventional amplifier tube. The cathode is a cup with the emitting surface on the end, and the grid is a larger cup with a hole in it. The normal emission is microamperes. Focus is achieved by projecting the size of the hole onto the CRT screen, so you are talking about small structures.

If you can actually find leakage between grid and cathode---and you should be able to see it with an HP-412A ohmmeter, which uses microamps and has a 100 megohm range (at center scale), then you can try to clear the fault. The classic method for this was to give it a "shot" of a Ford (model T) coil. That might also put the CRT out of business permanently as well.

>

> So what's the failure mode here? I was thining if the cathode was shorted
> to anything I could isolate it, but inasmuch as the volatages are correct I
> tend to doubt it.

>

The symptoms you've described sound as though you are not getting actual bias between grid and cathode. I can't think of a failure mode for this type CRT where you can vary the bias voltage but not get intensity control.

--

=====
Hank van Cleef
E-mail vancleef@netcom.com or vancleef@tmn.com
=====

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Larry Godek <AZCOT@gnn.com>

Subject: Solar tester

Message-ID: <199612261608.LAA24537@mail-e2b.gnn.com>

Some time back (several months) I mentioned that I had picked up a Solar model CF Capacitor Exam-eter. Well the thing didn't come with any test leads (of course not silly).

One of the things they talk about using is a set of "twin conductor QC-465 test leads". Unfortunately the manual neither shows a picture of them nor a description of this item anyplace.

To quote the manual, "Under normal conditions, the circuit is balanced so that it will not oscillate with standard QC-465 test leads plugged in."

Anyone ever 1:seen or used one of these things?
 2:know if Solar is still in business?
 3:have any idea what these things (QC-465) actually
 are?

They also refer to a "Type RT-3 test fixture" and sez that "this accessory greatly facilitates the testing of capacitors and resistors.

The unit is in immaculate condition and I would like to utilize it. Wonder where all the test leads go that comes with all this misc test gear that appears on the market? At least I got a manual with this one which is more that comes with most stuff.

Any help would be appreciated for you most knowledgeable folks?

I hope all of you had a most wonderful Christmas and your new year will be most prosperous.

Larry Godek W00GH
AZCOT@gnn.com

Gilbert, AZ. 85233

Ex-W6KQL, W8BPV, DL5LS, K0TAO, KN6TUP

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: vancleef@netcom.com (Henry van Cleef)
Subject: Re: Solar tester (test leads/fixtures)
Message-ID: <199612261743.KAA29891@netcom9.netcom.com>

As Larry Godek discourses

>

> Some time back (several months) I mentioned that I had picked up a
> Solar model CF Capacitor Exam-eter. Well the thing didn't come
> with any test leads (of course not silly).

While I'm not familiar with this gizzy, I don't let a lack of test leads/prods/fixtures external to the device stop me from using it. What you need to kludge up depends on the device, and how it operates. I would suspect that this device has an oscillator and a bridge circuit which measures capacitance by measuring phase angle introduced by a cap.

>

> One of the things they talk about using is a set of "twin conductor
> QC-465 test leads". Unfortunately the manual neither shows a
> picture of them nor a description of this item anyplace.

AHA!! "Twin conductor" is your clue. I suspect that these leads were off-the-shelf twisted pair cable, or shielded twisted pair. The schematic should give you a clue as to whether a shield was used. You can get cable in both configurations---even Radio Shack sells the stuff. Easiest way to find out what's called for here is to kludge up a twisted pair cable and make some measurements with it. Does the device have a "zero" control on it with a fairly wide range for nulling out the effects of cable capacitance?

In selecting cable, coax is generally used for "single-ended" signals, where one conductor has a voltage swing and the other remains at ground potential. Note carefully that current flow in such a setup is NOT single-ended. It is balanced, per Kirchoff's current law. RG-58A/U (the stranded conductor stuff) and RG-174 both work well if you can live with 50 ohms. There are other cables for 75 and 93 ohms. Take a careful look at the schematic and see if there is a characteristic impedance termination in the box.

Twisted pair is used for voltage-balanced signals. It has the advantage of readily passing differential signals, but being relatively insensitive to common mode signals, distortion rum-doolies such as would be introduced by attempts to use the cable as an oscillator tank circuit (parasitics---which they address in the manual). Your box may also use a toroid inside, wound with two windings in pushme-pullyu configuration, to assure balanced currents and attenuate unbalanced currents. Note again that this is CURRENT, not voltage.

Shielded twisted pair is used where external radiation is an issue---either RFI pickup from outside or RFI generation from signals

on the conductors. The shield is always connected at only one end so that it is an electrostatic shield, and carries no signal current.

>

> To quote the manual, "Under normal conditions, the circuit is
> balanced so that it will not oscillate with standard QC-465 test
> leads plugged in."

This may imply some series resistance in the cable. You can generally dummy this up with a fixed resistor at one end. Tek scope probes used a special resistive-conductor cable on which Tek had a patent, and which was, I think, made in-house by Tektronix. So far as I know, this was not commonly used for other equipment---the need for parasitic suppression in the scope probe was tied to the characteristics of cathode followers, which will sing quite happily under certain circumstances. On a capacitance-measuring device, series resistance will shift the calibration, particularly on large value caps.

>

> Anyone ever 1:seen or used one of these things?
> 2:know if Solar is still in business?
> 3:have any idea what these things (QC-465) actually
> are?

"Dunno" is my comment on above, over and above what I've said about the cable. A little study of the circuit and experimentation should go a long ways to helping you devise something.

One thing to remember is that "instrumentation" in most cases means "low quantity production," and that designers of such devices specifically used off-the-shelf items wherever possible. Odds are on that your QC-465 test leads used standard Belden cable of some sort.

>

> They also refer to a "Type RT-3 test fixture" and sez that "this
> accessory greatly facilitates the testing of capacitors and
> resistors.

This is probably a plastic fixture with some clips on it so that you could simply slide a resistor or cap into the clips, measure it, and pull it back out. As I recall, Tek offered such a fixture for the LC-130, and there were other such fixtures for transistor and diode testing. One small manufacturer who specialized in production test fixtures of this type was Nick Cedrone's "Daymarc," in Waltham Mass. I've lost track of Nick, although I know he's been out of the building he used in the sixties for 20 years or so. He built fixtures offered OEM by both Tektronix and Teradyne. Another house that did work like this was Stocker and Yale in Beverly, Mass. I mention these two because I worked with both of them on several projects. Both houses were small operations, led by an individual who was an excellent mechanical designer with smarts in tool-and-die processes for

short-run production.

>

> The unit is in immaculate condition and I would like to utilize it.

> Wonder where all the test leads go that comes with all this misc

> test gear that appears on the market? At least I got a manual with

> this one which is more that comes with most stuff.

Test leads take most of the abuse, so it's not too surprising that they vanish. Unfortunately, the test prod ends often vanish with them. While you can replace wire with off-the-shelf Belden cable in most cases, prods are another problem. I would like to find a source of probe ends that have a switchable X1/X10 feature that switches in 1 megohm instead of the 10 megs used for switchable scope probes. That would bring a lot of RCA VTVM's back to life.

I have modified WV-97A VTVM's to have a 1 meg resistor mounted on the function switch, so that you can use an X1 scope probe with it for both AC and DC measurements. Works fairly well, although with the resistor in the box, you can get probe loading trying to measure DC-on-AC. To complete the job, I knock out the Amphenol (now made by Switchcraft) microphone connector and install a neck-mounted BNC connector, which goes right in the hole. Same deal with the old service shop signal generators like the Precision E-200-C, which used this connector and cheap mike cable. BNC's allow use of pre-made cables.

>

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Hank van Cleef

E-mail vancleef@netcom.com or vancleef@tmn.com

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From boatanchors@theporch.com Thu Dec 26 11:20:27 1996

From: mirage!pamars@uucp-1.csn.net (P.A.Marshall)

Subject: South Bend, Indiana fest?

Message-ID: <9612252338.AA12831@mirage>

Does anyone know when the South Bend Indiana ham fest date is?

Al Marshall

"Real Radios Glow in the Dark"

almarshall@acm.org

1+219.665.5072

Mirage Computers, Inc.

pamars@mirage.angola.in.us

"The lyf so short, the craft so long to lerne." - Chaucer

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Karan Lee Carruth <klccarru@tenet.edu>
Subject: TCS Help Needed
Message-ID: <Pine.OSF.3.91.961225212057.9191A-100000@gaston.tenet.edu>

I have a TCS-13 receiver that has a lot of, what appears to be, 60 cycle hum in the MOD mode. The hum is not present in the CW mode. Switching the AVC off with the RF GAIN control while in the MOD mode does not eliminate the hum. Grounding the lower end of C229 (which turns on the BFO but leaves the AVC on) while in the MOD mode causes the hum to go away. Thus, I assume that the problem is related to the BFO function and not to the AVC function.

All of the resistors in the V206 circuit check within tolerance. The capacitors seem to be okay. Switching tubes does not help. Otherwise, the receiver works very well.

Anybody got any ideas for a Mechanical Engineer with limited electronic talents?

Thanks in advance.

Lenox Carruth, WA50VG
klccarru@tenet.edu

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: Richard Hager <rhager@millcomm.com>
Subject: Tek 564 still here. 504, 561A, & Dana, are gone
Message-ID: <32C2C461.1415@millcomm.com>

Hi gang,

The Dana BA DMM, the Tek 561A, and the Tek 504, have all gone to happier homes where they'll be loved and looked after.

The Tek 564 10mhz Storage Scope mainframe is still available. This sweet BA scope gives you everything a 561 has, plus storage. Real handy if you want to sweep a narrowband IF (where you have to sweep slowly in order to get the correct response). \$100 pickup, or \$120 shipped UPS ground.

I prefer that you have your own plugins for it, but I may be able to come up with a set if needed. Most likely a 3A72 dual trace, and a 2B67 single timebase. By the way, my original post said I had a full manual available. My mistake. I don't. I do have a clean set of schematics,

graciously donated by Mark Pilant, and I'd be happy to include a copy of those.

Also, the 'G' and 'H' plugins for Tek 540/530 series scopes are still available.

Finally, if you've been wanting a real capable scope for your shop, I have a Tek 464 100mhz portable Storage Scope available for \$400. This is basically the famous Tek465, plus storage capability. Works well. Original Tek service manual available for an additional \$35.

I hope you're all having a wonderful holiday. I received a big box full of goodies a few days before xmas, and have been having a ball cleaning off labels, doing cal's, and playing with new toys!

My best regards to all the generous, intelligent, and humorous members of BA ! And my thanks to Jack for administering this wonderful facility.

Richard
--

Richard Hager

+ Ah-ha! Design Group, Inc. -
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+ "I just like to make things" So... -
+ ...please call Ah-ha! directly for CNC info -
+ <http://www.millcomm.com/~ahha> email: ahha@millcomm.com -

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: "Lawrence R. Ware" <lrware@pipeline.com>
Subject: RE: The HP 400D VTVM
Message-ID: <3.0.16.19961226185426.2b275ebc@pop.pipeline.com>

At 15:53 12/26/1996 -0600, dmcintyr@acs.ucalgary.ca wrote:
>When off the meter
>needle sits where it should, with power applied the needle sits above
>zero, and I cannot find a control inside to zero it

Hey! A question I can answer... :-)

>From the HP 400D manual, Operation section:
"...the meter pointer should indicate zero before the instrument is
turned on."
"....After the instrument is turned on, the meter pointer
may show an indication of as much as two scale divisions, principally

on the one volt range. This effect is normal and does not impair the accuracy of the instrument."

"... On the lowest three ranges of the instrument the high input impedance coupled with the gain of the amplifier causes the meter needle to be forced against the right hand stop of the meter when the input terminals are unshielded. This condition is normal and is caused by stray voltages in the vicinity of the instrument."

On a more personal note, I really like the HP 400 series.
I own several and use them often...

-Larry

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lrware@pipeline.com - Orlando, Florida -

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: Michael Crestohl <mc@shore.net>
Subject: TRADE: Electric Radio back issues.....
Message-ID: <199612260924.EAA06537@northshore.shore.net>

Hello Everyone:

Hope Santa was good to each and every one of you.....

I was going through my Electric Radio collection and have some wants and spares to swap.

I need issues numbers 1, 5, 7, 11, 15 and 19,

I have to trade issue numbers 30, 34, 35, 37, 42, 46, 54

Any takers?

73,

Michael Crestohl, W1RC

mc@shore.net

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: bowes@ibm.net
Subject: UX-201A's needed and a story
Message-ID: <9612260329.AA0164@localhost>

I am looking for 5 UX-201A tubes for the restoration of an Atwater Kent model 10B. Other 201A (01A) variants are acceptable so long as they are the globe style and not the ST type.

Now for the nauseating story. A student of mine came into class one day and upon learning that I liked to play with old radios offered up a comment that he had an old one in his garage that he would bring in. A week later at break time he brought the rig in, an Atwater Kent 10B. At the time I had no idea what the thing was or what it was worth. He told me that he just wanted to get it out of the garage and if I wasn't interested he would probably have a garage sale and try to get ten bucks for it. I asked him if he would consider an offer of twenty dollars for it and he readily accepted. (You collectors can wipe your tears now!) Anyway, the thing is extremely dirty, but it all appears to be intact, except the tubes. I have since come to learn what an extremely rare and desirable rig this thing is. Sometimes even a blind monkey can find a banana in the jungle!

Tom Bowes
KK8M

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HEY! Anybody got a spare DM-28Q?! OK, I'll settle for a National speaker to go with my HRO-50T1!

From boatanchors@theporch.com Thu Dec 26 18:10:17 1996
From: Dave metz <metzd@cfw.com>
Subject: Warped dials-- A success
Message-ID: <2.2.32.19961226223324.00722940@milo.cfw.com>

Sometime back there was a thread on repairing the HQ 170 dials that had warped. As mine were useless, nothing much to lose by trying to experiment on repairing. Well, thanks to a comment by Barry Ornitz, I think I had a success with the white and clear sections. I went out and got two sheets of 3/8" aluminum about an inch or two larger than the dial. Barry suggested that plastic needs to get not more than 250 degrees. So I took a hand grinder and ground off the rivets of the center spindle to release the

plastic from the metal. Then I put the plastic between the two sheets and clamped them together with 3 C clamps with VERY light pressure. Then to borrow my wife's candy thermometer and preheat the oven to 225 degrees for an hour or so. Then in goes the "assembly" for cooking for an hour. Then remove it and let cool to room temperature. Its straight as a new one and I reattached the white plastic to the spindle with clear silicone rubber and toothpicks to center it in the original rivet holes.

The clear ones needed a little more help as they were badly warped. Initially, I very lightly clamped one of them and due to the severe distortion I broke it! oops. So, the next step was heat the oven to a comfortable 200 deg and put them into the oven with no clamp, just the top alum panel. After about 20 minutes, they had softened and then I lightly clamped them without breaking. I then raised the temp to about 220 deg for about 20 minutes and tool them out to cool at room temp. Fantastic results. I got out the two part epoxy and added another thin sheet of plastic behind the break, let it harden overnight and then took a dremel tool and cut the overhand off.

Observations:

Whew! I dodged another bullet. This white plastic held up well and I didn't have anything to lose because it was useless as it was. The only word of caution is to use very light pressure on the C clamps or they will squish it out to make it out of round and, as Barry cautioned, no more than 225 degrees and preheat the oven. I have a slight out of roundness but its larger and I don't suspect that it will cause a problem and if it does, time to spin it and make it a perfect circle.

This may not be proper, but a big thanks to Hank and Barry and all others who so generously give of their time to make responses and give their insight via this group to people like myself who will never learn as much as they have forgotten. I feel like I am taking a \$500 graduate course for \$12/year and what a bargain--- lots of instructors, lots of knowledge, and lots of fun. I hope you master contributors who must be bored as heck answering the same Radio 101 questions time and time again will remember that I know a lot more today than last year and I am incredible grateful for that new understanding.

73's dave

From boatanchors@theporch.com Thu Dec 26 11:20:27 1996
From: jkh@lexis-nexis.com (John Heck)

Subject: Weston Instrument History

Message-ID: <9612261713.AA13431@beans.lexis-nexis.com>

Folks,

Can anyone point me to a reference for historical information on the Weston Instrument Company? I will be interested in information on the Weston company as well as its product line. This material might be published material or online sources. Thanks.

Regards,

John Heck, KC8ETS

1009 Donson Drive

Dayton, Ohio 45429

(513)865-7036(work)

jkh@lexis-nexis.com